

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
10 February 2005 (10.02.2005)

PCT

(10) International Publication Number
WO 2005/012437 A1

(51) International Patent Classification⁷: **C09B 44/16**,
A61K 7/13

(21) International Application Number:
PCT/EP2004/051481

(22) International Filing Date: 14 July 2004 (14.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03102286.6 24 July 2003 (24.07.2003) EP

(71) Applicant (for all designated States except US): **CIBA
SPECIALTY CHEMICALS HOLDING INC.** [CH/CH];
Klybeckstrasse 141, CH-4057 Basel (CH).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ELIU, Victor, Paul**
[DE/DE]; Im Lögelhardt 2, 79539 Lörrach (DE). **FRÖH-
LING, Beate** [DE/DE]; Im Stutz 10, 79585 Steinen (DE).

(74) Common Representative: **CIBA SPECIALTY CHEM-
ICALS HOLDING INC.**; Patent Department, Klybeck-
strasse 141, CH-4057 Basel (CH).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

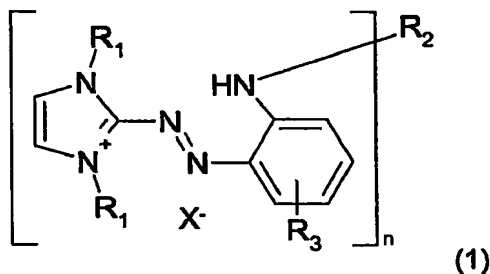
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- with amended claims

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: **CATIONIC DIRECT DYES**



(57) Abstract: The present invention relates to novel the
cationic dyes of formula (1) wherein R₁ is an unsubstituted or
substituted C₁-C₁₄ alkyl or an aryl radical; X⁻ is an anion; R₃
is an unsubstituted or substituted C₁-C₁₄ alkyl, aryl radical,
C₁-C₆ alkoxy, cyanid, nitro or halide; n is 1 or 2; and if n is 1,
then R₂ is hydrogen, unsubstituted or substituted C₁-C₁₄ alkyl;
or if n is 2, then R₂ is an unsubstituted or substituted C₁-C₁₄
alkylen. Further, the present invention relates to compositions
thereof, especially comprising other dyes, to processes for
the preparation thereof and to the use thereof in the dyeing
of organic material, such as keratin, wool, leather, silk, paper,
cellulose or polyamides, and preferably human hair.

WO 2005/012437 A1